

ABSTRACT OF THE DISCLOSURE

A surface acoustic wave element includes a single crystal substrate; a buffer layer formed by a crystal film that is formed on top of the single crystal substrate; and a piezoelectric thin film having a hexagonal system or a trigonal system crystal structure that is formed on top of the buffer layer. The surface acoustic wave element has an improved performance by improving the film quality of the piezoelectric thin film. In addition, because a semiconductor device can be formed on the single crystal substrate, the surface acoustic wave element can be integrated with the semiconductor device.

Moreover, leakages of surface acoustic waves into the single crystal substrate are prevented. There are also provided a frequency filter, an oscillator, an electronic circuit, and an electronic instrument that are provided with this surface acoustic wave element.